Claims

[c1]   1. A method of estimating carrier frequency offset in a constant-period, preambled wireless communications system, the method comprising:
determining a main-cursor signal corresponding to a main-cursor path from a matched code output;
multiplying the main-cursor signal by a delayed conjugated version of the main-cursor signal to obtain a first result; and
estimating the carrier frequency offset according to a predefined formula utilizing the first result.

[c2]   2. The method of claim 1 wherein the main-cursor signal is determined using peak-detection.

[c3]   3. The method of claim 1 wherein the predefined formula includes multiplying a phase of the first result by the sign of a real part of the first result.

[c4]   4. The method of claim 3 wherein the main-cursor signal is a BPSK signal.

[c5]   5. The method of claim 1 wherein the communications system is a DSSS wireless communications system.

[c6]   6. A device for use in a constant-period, preambled wireless communications system, the device comprising: a transceiver for wirelessly communicating with another communications device within the communications system; and

control circuitry connected to the transceiver, the control circuitry comprising a CPU and a memory, the memory comprising:

program code capable of causing a main-cursor signal corresponding to a main-cursor path to be determined from a receivers matched code output;

program code capable of causing the main-cursor signal to be multiplied by a delayed conjugated version of the main-cursor signal to obtain a first result;

program code comprising at least a predefined formula; and

program code capable of causing a carrier frequency offset to be estimated according to the predefined formula utilizing the first result.

[c7]   7. The device of claim 6 wherein the main-cursor signal is determined using peak-detection.

[c8]   8. The device of claim 6 wherein the predefined formula includes multiplying a phase of the first result by the sign of a real part of the first result.

[c9]   9. The device of claim 6 wherein the main-cursor signal is a BPSK signal.

[c10]   10. The device of claim 6 further comprising a keyboard and LCD.

[c11]   11. The device of claim 6 wherein the communications system is a DSSS wireless communications system.

[c12]